TEXAS DEPARTMENT OF INSURANCE

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PRODUCT EVALUATION Effective December 1, 2003
DR-95

*The following product has been evaluated for compliance with the wind loads specified in the **International Residential Code (IRC)** and the **International Building Code (IBC)**. This product shall be subject to reevaluation 3 years after the effective date.*

This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.

This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code and the Texas Engineering Practice Act.

Precision Entry 20 gauge Steel Entry Doors, Non-Impact Resistant, manufactured by

Precision Entry, Inc.
2150 State Route 39 W
Sugarcreek, OH 44681
(800) 669-4711

will be acceptable in designated catastrophe areas along the Texas Gulf Coast when assembled and installed in accordance with the manufacturer's installation instructions and this product evaluation.

PRODUCT DESCRIPTION

The entry door units evaluated in this report consists of Precision Entry, Inc. 20 gauge steel insulated entry door systems. For new construction, Precision Entry, Inc. manufactures a 20 gauge steel single door with sidelites and transom mounted in wood frames. For replacement construction, Precision Entry, Inc. manufactures a 20 gauge steel single door with a steel frame. All of the units are available with fixed insulating glass. This evaluation report includes steel door assemblies with overall dimensions up to 68" x 100" for new construction assemblies and units with overall dimensions up to 36" x 84" for replacement assemblies.

Description of Systems:

New Construction (Entry Door, Sidelites and Transom with wood frames)

Configuration: OXO (Outswing and Inswing single door) with O (fixed transom)
Maximum Door Panel Size: 2'-11 ¾" wide x 6'-11" high
Maximum Sidelite Panel Size: 1'-3 ¾" wide x 6'-11" high

Door and Sidelite Frame Construction: The head and jambs are constructed of finger-joint Pine members with coped, butted and sealed corners fastened with five (5) ½" x 1¾" staples. The sill is constructed of an extruded aluminum member with coped, butted and sealed corners fastened to the jambs with #8 x 2" long screws at each end.

Door and Sidelite Panel Construction: The panels are constructed of 20 gauge (0.036" thick) galvanized steel skins with a smooth finish. The interior cavity is filled with polyurethane foam. The top and bottom rails utilize steel inserts.

PRODUCT DESCRIPTION (continued)

Doorlite Construction: The doorlites are constructed from a two-piece molded plastic frame. The frames are secured together with #8 x 1 ½" long galvanized drywall screws. The door panel lite is secured 3" from each corner and 8" o.c. in the jambs, and 3" from each corner and 12" o.c. at the head and sill. The sidelite panels are secured 3" from each corner and 14" o.c. at the jambs, and one at midspan of the head and sill. The perimeters of the lites are sealed with silicone.

Transom Frame Construction: The transom frame is constructed of finger-joint Pine members with coped, butted and sealed corners fastened with five (5) ½ x 1 ¾" staples. The wood glazing stops are fastened to the transom frame with #8 x 1 ¼" long galvanized drywall screws. The fasteners are located 3" from each corner and 8" o.c. along the head and sill. The fasteners are located along the jamb 2" from each corner and at the midspan.

General Assembly: The heads and jambs of the assembly utilize brick molding that is fastened to the frames with #8 x 3" long galvanized drywall screws located 2" from each end and spaced 8" o.c., and with 2 ½" long brads, located 4" from each corner and spaced 12" o.c. The threshold is attached to the brick molding with a 2 ½" long brad and a #8 x 1 ⅝" long galvanized drywall screw at each corner. The mullion assembly joints utilize exterior wood covers that are fastened to the frames with #8 x 3" long galvanized drywall screws, located 2 ½" from each end and 12" o.c., and 2 ½" long brads, 2" from each corner and spaced 13" o.c. The interior mullion covers are fastened to the frame with a ¼" x 1 ½" staple into each member, 2" from ends and 13" o.c.

Horizontal Mullion Assembly: The sidelite frames are fastened to the transom with #8 x 2" long galvanized drywall screws located 2" from each jamb. The doorframe is fastened to the transom with #8 x 3" long screws, located 4" from each jamb and spaced 12" o.c. The transom is fastened to the sidelite and door frames with #8 x 3" long screws, located 3" from each jamb and spaced 12" o.c.

Vertical Mullion Assembly: The sidelites frames are fastened to the door jambs with #8 x 2" long galvanized drywall screws, located 6" from each end and spaced 16" o.c. The strike jamb of the door is fastened to the sidelite frame with #8 x 3" long galvanized drywall screws, located at 13", 16" and 29" from the threshold and 2", 14", and 28" from the head. The hinge jamb of the door frame is secured to the sidelite frame with #8 x 3" long galvanized drywall screws, located at 2", 16", 32", 52", 62" and 79" from the threshold.

Glazing:

Glazing Material: The panels are glazed with 1" insulating glass units. The insulating glass units are comprised of two lites of ⅛" thick tempered glass separated by a butyl metal reinforced spacer system.

Glazing Method: The door and sidelites are interior glazed against a silicone bedding. The lites are installed onto one-half of a two-piece frame. When the pieces are screwed together, the glass is sandwich glazed into the frame. The transom lite is interior glazed against foam glazing tape and secured with wooden glazing stops that are fastened with #8 x 1 ¼" long galvanized drywall screws, located 2" from each corner and spaced 12" o.c. thereafter.

Door Panel Daylight Opening: 1'-8 ¾" wide x 5'-3" high
Sidelite Panel Daylight Opening: 0'-6" wide x 5'-3" high
Transom Fixed Daylight Opening: 5'-5" wide x 1'-0 ¼" high

PRODUCT DESCRIPTION (continued)

Hardware:

Hinges: Three (3) 4" butt hinges located at 8 ½", 41 ½" and 74 ½" from the threshold fastened to the door panel with four (4) #10 x ½" long screws to attach each hinge to the door slab and four (4) #10 x 2 ½" long galvanized drywall screws to attach each hinge to the jamb.

Deadbolt: Schlage Series B360 deadbolt assembly is located 41 ¼" from the threshold, with the strike fastened to the jamb with two (2) #8 x 2 ½" long galvanized drywall screws.

Door Knob Assembly: Schlage Series F-51N door knob assembly is located 35 ¼" from the threshold, with the strike fastened to the jamb with two (2) #8 x 2 ½" long galvanized drywall screws.

Throw Bolt (required on 60 psf assembly): Two (2) bolts located at each end of the interior strike fastened to the door with four (4) #8 x 1 ¼" long galvanized drywall screws.

Upper Throw Bolt Plate: One reinforcing plate fastened to the horizontal mullion with five (5) #10 x 1 ¼" long galvanized drywall screws.

Upper Throw Bolt Catch: One catch fastened to the horizontal mullion with two (2) #8 x 2 ½" long galvanized drywall screws.

Lower Throw Bolt Catch: One catch fastened to the sill with four (4) #10 x 2 ½" long galvanized drywall screws.

Replacement Doors (Entry Doors with steel frames)

Configuration: X (Outswing and Inswing single door)
Maximum Door Panel Size: 2'-10 ¾" wide x 6'-9 ¾" high

Door Panel Construction: The panels are constructed of 20 gauge (0.036" thick) galvanized steel skins with a smooth finish. The interior cavity is filled with polyurethane foam. The top and bottom rails utilize "U" shaped steel inserts.

Door Frame Construction: The head and jambs utilize a two piece frame consisting of an exterior aluminum stop and interior steel frame angle.

Glazing:

Glazing Material: The panels are glazed with 1" insulating glass units. The insulating glass units are comprised of two lites of ⅛" thick tempered glass separated by a butyl metal reinforced spacer system.

Glazing Method: The lite is interior glazed against a silicone bedding. The lites are installed onto one-half of a two-piece plastic frame. When the pieces are screwed together, the glass is sandwich glazed into the frame.

Door Panel Daylight Opening: 1'-8 ¾" wide x 5'-3" high

PRODUCT DESCRIPTION (continued)

Hardware:

Hinges: Three (3) 4" butt hinges located at 6" from the top and bottom of the door panel, and one located at midspan, with four (4) #8 x ½" long galvanized drywall screws for attachment each hinge to the door panel and four (4) #8 x 2½" long galvanized drywall screws to attach each hinge to the jamb.

Deadbolt: Schlage Series B360 deadbolt assembly is located 41" from the threshold with the strike fastened to the jamb with two (2) #8 x 2½" long galvanized drywall screws.

Door Knob Assembly: Schlage Series F-51N door knob assembly is located 37½" from the threshold with the strike fastened to the jamb with two (2) #8 x 2½" long galvanized drywall screws.

Product Identification: All doors shall be labeled with the manufacturer's name, series number and design pressure rating.

LIMITATIONS

System	Maximum Dimensions		Design Pressures (psf)
	Width (in.)	Height (in.)	
Entry Door with Sidelites and Fixed Transom (Outswing)	68	100	±45
Entry Door with Sidelites and Fixed Transom (Inswing)	68	100	±60
Replacement Entry Door (Outswing)	36	84	±39
Replacement Entry Door (Inswing)	36	84	±50

Impact Resistance: These door assemblies do not satisfy the Texas Department of Insurance's criteria for protection from windborne debris. These door assemblies will need to be protected with an impact protective system.

Acceptance of Smaller Assemblies: Door assemblies with dimensions equal to or smaller than those specified above are acceptable within the limitations of this report.

INSTALLATION INSTRUCTIONS

General: Doors shall be installed in accordance with the manufacturer's installation instructions and this product evaluation. Doors assemblies shall be fastened to minimum Spruce-Pine-Fir wood framing members.

INSTALLATION INSTRUCTIONS (Continued)

New Construction (Entry Door with Sidelites and Transom)

Attachment to wood: The perimeter of the door assembly is anchored through the frame to the surrounding wood framing members with #8 x 3" long galvanized drywall screws located 6" from each end of the jambs and head and spaced 16" o.c. In addition, paint grade Pine brick molding is placed on the exterior perimeter along the jambs and head. The brick molding is fastened with #8 x 3" long galvanized drywall screws located 3" from each corner and spaced 6" o.c. through the brick molding into the wood framing surrounding the opening. The perimeter of the brick mold is sealed with silicone. The door sill is anchored with #8 x 3" long galvanized drywall screws located 3" from each door jamb and spaced 8" o.c.

Attachment to masonry: For attachment to concrete or masonry, a $\frac{3}{16}$" diameter x 3" long ITW Tapcon concrete screw may be used as a substitute for the drywall fasteners. The Tapcon fastener shall have sufficient length to have a minimum penetration of $1\frac{1}{4}$" embedment into the masonry or concrete. Concrete shall have a minimum compressive strength of 3,000 psi and the masonry shall have a minimum compressive strength of 1,500 psi.

Replacement Doors for Existing Construction (Entry Door)

Attachment to wood (Inswing Door): For inswing replacement doors, an exterior aluminum stop is installed along the inside face of the jambs and head. The exterior aluminum stop is anchored along the jambs and head to the wood framing with #8 x 2" long galvanized drywall screws. The screws are located at 3" and 12" from the top and bottom of the jambs, one at 36" from the end (5 total on each jamb), one 3" from the ends of the head and one at midspan.

An interior steel angle replacement frame is attached to the wood framing with #8 x $2\frac{1}{2}$" long galvanized drywall screws, spaced 6" and 25" from the lock jamb ends and 3", 12" and 36" from the hinge jamb ends. The interior face of the steel angle frame is also attached along both jambs with #8 x $\frac{3}{4}$" long galvanized screws located 10" and $25\frac{1}{2}$" from both ends of the jambs and at midspan. The head of the interior frame angle is attached with one #8 x $\frac{3}{4}$" long galvanized screw located at the midspan.

The threshold is anchored with #8 x 3" long galvanized deck screws through the interior frame angle into the wood framing, located 3" from each end and spaced 8" o.c.

The lock strikes for both the handle and deadbolt are attached through the interior frame angle into the wood framing members with two (2) #8 x $2\frac{1}{2}$" long galvanized screws at each strike.

The hinges shall have a minimum of two (2) #8 x $2\frac{1}{2}$" long galvanized screws to attach the hinges through the interior frame angle into the wood frame at each hinge location.

Attachment to wood (Outswing Door): For outswing replacement doors, an interior aluminum stop is installed along the inside face of the jambs and head. The interior aluminum stop is anchored along the jambs to the wood framing with #6 x $1\frac{1}{2}$" long galvanized drywall screws. The screws are located at 10" from each end and spaced a maximum of 18" o.c. (5 total on each jamb). For the head, a #10 x $1\frac{3}{4}$" long galvanized drywall screw is located 1" from the ends of the head and one at midspan (3 total for the head).

The door frame is secured to the wood framing with #8 x 2" long galvanized drywall screws, located 2" from the top and bottom of each jamb and spaced a maximum of 18" o.c. The hinge jamb is further secured to the wood framing with #10 x 2 ½" long galvanized drywall screws, located 2" above and below each of the three hinges (6 total). The lock jamb is further secured with #10 x 2 ½" long galvanized drywall screws located 6" and 26" from each end of the jamb (4 total). The lock jamb is also secured with two (2) #8 x 2 ½" long galvanized drywall screws through the door handle strike plate and two through the deadbolt strike plate. The head of the frame is fastened to the wood framing with #8 x 2" long galvanized drywall screws, located 2" from each end and one at the midspan. The threshold is secured with #8 x 3" long screws, located 3" from each end and spaced a maximum of 12" o.c.

Attachment to masonry (Inswing or Outswing): For attachment to concrete or masonry, a 3/16" diameter x 3" long ITW Tapcon concrete screw may be used as a substitute for the drywall fasteners. The Tapcon fastener shall have sufficient length to provide a minimum penetration of 1 ¼" embedment into the masonry or concrete. Concrete shall have a minimum compressive strength of 3,000 psi and the masonry shall have a minimum compressive strength of 1,500 psi.

Note: The manufacturer's installation instructions shall be available on the job site during installation. Fasteners shall be corrosion resistant as specified in the International Residential Code (IRC) and the International Building Code (IBC).